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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,586	11/04/1999	ROGER GUY MARKHAM	103245	2748

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EXAMINER

RAHIMI, IRAJ A

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/433,586

Applicant(s)

MARKHAM, ROGER GUY

Examiner

(Iraj) Alan Rahimi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 14 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

### ***Remarks***

1. In view of the Appeal Brief filed on April 5, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Claims 1-21 are presently pending in the application.

### ***Specification***

3. Claim 21 is objected to because of the following informalities: The last line of the claim specifies "database". Examiner believes that it was meant to be "data bus". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 6, 9, 10-13 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Peters et al. (US patent 5,077,806). This reference was supplied in Office Action #7.

Regarding claim 1, Peters discloses an apparatus that counts pixels in regions of interest within data present on a data bus 74, the data on the data bus including image data having active and inactive pixels, the apparatus comprising a pixel counter 60, coupled to the data bus 74, that selectively reads the image data from the data on the data bus and that generates a pixel count based on the active pixels of the image data (column 3, lines 53-67; column 4, lines 1-3). Counting pixels at desired interval is considered to meet the limitation for selectively reading the image data.

Regarding claim 2, Peters discloses the apparatus according to claim 1, wherein the pixel counter includes:

a pixel count controller 71 coupled to the data bus that determines whether the data on the data bus is image data based on the image data identifying portion(column 4, lines 3-11);

a counter coupled to the pixel count controller that counts the active pixels of the image data (column 3, lines 53-58); and

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a memory 72, coupled to the pixel counter controller and the counter, that stores the pixel count (column 4, lines 12-18).

Regarding claim 6, Peters discloses the apparatus according to claim 1, wherein the image data is grouped into a scan line, the scan line comprising at least one row of pixels extending across an image (column 3, lines 65-68 and column 4, lines 1-2).

Regarding claim 9, Peters discloses the apparatus according to claim 7, wherein: the pixel counter generates the pixel count based on the pixel count in each of the frame; and a memory separately stores the active count of each frame (column 4, lines 12-17).

Regarding claim 10, Peters discloses the apparatus according to claim 6, wherein the pixel counter generates the pixel count based on the active pixels of each of the scan lines (column 3, lines 65-68 and column 4, lines 1-2).

Regarding claim 11, Peters discloses the apparatus according to claim 1, wherein the pixel counter comprises:

an adder that receives image data and counts the active pixels present in the image data (column 1, lines 62-68);

a frame counter that measures the amount of image data being added by the adder and instructs a memory to read the active pixel count from the adder and store the read pixel count when a frame of image data has been counted (column 3, lines 65-68 and column 4, lines 1-2).

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Regarding claims 12 and 13, arguments analogous to those presented for claim 1 and 2, are applicable.

Regarding claim 20, Peters discloses the apparatus according to claim 1, wherein the image data on the data bus is directly read from the data bus to be provided to the pixel counter (Fig. 2).

Regarding claim 21, Peters discloses the method of claim 12, wherein selectively reading the image data on the data bus comprises selectively and directly reading the image data from the data bus and providing the image data read from the database to the independent pixel counter (Fig. 2; column 3, lines 65-68; column 4, lines 1-2).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-5, 14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters (US patent 5,077,806) in view of Newman (US patent 5,287,452).

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Regarding claim 3, Peters does not clearly disclose the apparatus according to claim 1, wherein the data on the data bus includes a data portion, a memory address portion, and an image data identifying portion (column 3, lines 11-23). Peters does teach address decoding unit 73 employed to multiplex the address lines into control lines for signaling a device that it should send or receive information on the data bus (column 4, lines 18-24). However, Newman teaches in column 3, lines 11-23 that a processor transmits image as well as other data signals over the bus for storage. It also teaches memory mapping unit for converting virtual addresses to physical addresses. Peters and Newman are combinable because they are from the same field of endeavor that is communication of image and other data over the bus. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to use the Newman's invention for more accurate representation of data on the bus. The motivation for doing so would have been to limit the amount of data being stored in the image memory to avoid the need for large capacity memory. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Peters with Newman to obtain the invention as specified in claim 3.

Regarding claim 4, Newman discloses the apparatus according to claim 3, wherein the image data identifying portion is an image data flag that indicates whether the data on the data bus is image data (column 2, lines 62-67; column 3, lines 1-10; virtual address signal is considered the flag).

Regarding claim 5, Newman discloses the apparatus according to claim 3, wherein:

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the image data identifier portion includes an address; and when the image data identifier portion is the address of an image data memory connected to the bus, the pixel counter determines that the data on the data bus is image data (column 2, lines 62-67; column 3, lines 1-10).

Regarding claims 14 and 17, arguments analogous to those presented for claim 6 and 9, are applicable.

Regarding claim 18, Newman discloses the method according to claim 12, wherein selectively reading the image data comprises selectively reading the image data from the data bus based on an address in the image data identifying portion of the data on the data bus (column 3, lines 3-23).

Regarding claim 19, Newman discloses the method according to claim 18, wherein the data on the data bus is image data if the address is the address of a memory (column 3, lines 3-10).

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters (US patent 5,077,806) in view of Inora et al. (US patent (6,145,947).

Regarding claim 7, Peters does not disclose the apparatus according to claim 6, wherein each scan line is divided into a plurality of frames, each of the frames comprising a predetermined number of consecutive pixels of the scan line. Inora et al. in column 5, lines 40-67 discloses dividing the image into blocks of 16x64. Therefore each scan line is divided to 16



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pixels per frame. Peters and Inora are combinable because they are from the same field of endeavor that is image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to divide the image into blocks. The motivation for doing so would have been to detect ink consumption for effective blocks. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Peters and Inora to obtain the invention as specified in claim 7.

Regarding claim 8, Inora discloses the apparatus according to claim 7, wherein the plurality of frames are further divided into a plurality of pixel blocks, each of the pixel blocks comprising a predetermined number consecutive pixels of a frame (Each pixel of the Inora's block can be considered to be the block).

Regarding claims 15-16, arguments analogous to those presented for claim 7-8, are applicable.


#### ***Contact Information***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Iraj) Alan Rahimi whose telephone number is 703-306-3473. The examiner can normally be reached on Mon.-Fri. 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Alan Rahimi  
June 24, 2003

  
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